United States General Accounting Office

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Report to the Secretary of Defense

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ADP MODERNIZATION

Army Plans to Improve Budget Disclosure for Its Standard Depot System

GAO/IMTEC-88-30

GAO

United States
General Accounting Office
Washington, D.C. 20548

Information Management and
Technology Division

B-227223

May 25, 1988

The Honorable Frank C. Carlucci
The Secretary of Defense

Dear Mr. Secretary:

We have completed our review of the Army's program to modernize its automated Standard Depot System (SDS). This system is used to manage the Army's logistics activities at supply and maintenance depots. Our review was initiated due to continuing congressional interest in the status of major automated information systems within the Department of Defense. Our review objectives were to determine if the Army 1) established a framework to manage and control its modernization program, and 2) adequately disclosed SDS funding requirements in its budget exhibits.[1] This report provides you with the results of our review.

We found that the Army has a structured approach for managing the modernization program. However, its budget exhibits do not include enough information to clearly explain the modernization's cost and scope to the Congress. The Army's fiscal year 1988-1989 automated information system budget exhibit showed the total estimated cost of SDS at $745 million over 14 years. However, the Army estimates that only $58.7 million is for modernization. The remaining costs represent the total cost of maintaining and operating the existing system, as well as the future anticipated operations and maintenance costs for the modernized system.

According to the Office of Management and Budget (OMB) and Defense budget guidance, agencies are required to inform the Congress of their information technology requirements. In order to provide the Congress with clear and useful information, Army SDS budget exhibits should clearly distinguish between the cost of operating and maintaining the current system and the cost of modernization.

The Army agreed with our assessment and is taking immediate actions to improve future SDS budget exhibits by providing clearer information. We are reporting this issue to you because of the importance of providing clear information technology requirements and funding needs to you and to the Congress.

[1]Office of Management and Budget Circular A-11, Data on Acquisition, Operation, and Use of Information Technology Systems, requires that agencies prepare budget exhibits of estimated funding requirements for the acquisition and use of automated information technology.

Overview of Army's Standard Depot System Modernization Program

SDS is the basic automation system used to manage Army logistics activities at supply and maintenance depots. The current system uses batch processing[2] and makes extensive use of punch cards to enter information. Army initiated the modernization program primarily to eliminate the cumbersome punch cards in favor of the more user-responsive on-line[3] data entry and validation environment. The Army plans to change to this environment by upgrading existing hardware and system software, and by redesigning some application programs. According to Army officials, modernization is primarily limited to enhancing the existing system and should not be considered a system redesign. A total redesign of SDS is not planned to be addressed until 1995, Army officials said.

Army expects the improved system to be better able to meet mobilization, contingency, and peacetime commitments by 1) improving time receipt reporting through on-line verification of inputs, 2) eliminating hardcopies, by instead, using on-line capabilities, 3) improving data accuracy through more timely data correction and resubmission, 4) improving response time to current users, and 5) supporting more users.

SDS modernization will cost about $58.7 million and will be completed by June 1992, Army estimates. According to its cost-benefit study, SDS modernization will increase productivity and save an estimated $101.1 million through fiscal year 1995. Of the $58.7 million, the Army plans to spend about $21.9 million for new computer hardware. About $10.2 million has already been spent to buy and install new computers at seven Army depots. The remaining costs are for upgrading main memory in the newly acquired computers, and acquiring a larger computer system for the Letterkenny Army Depot in Chambersburg, Pennsylvania.

[2]Batch processing refers to data accumulated over a period of time, which is submitted to the computer for processing. Users generally cannot interact with the computer as data is processed.

[3]On-line refers to a user's ability to access and interact with a computer through a terminal.

The Army Has Established a Framework to Manage and Control SDS Initiatives

Department of Defense Directive 7920.1, Life Cycle Management of Automated Information Systems, and Army's Technical Bulletin 18-100 require management controls over major automated information systems development. These regulations seek to prescribe joint technical and functional policy governing systems development procedures that direct systems development and modernization. These procedures are designed to establish a management framework to help ensure that system requirements and performance goals are met at the lowest total overall cost.

Our review of SDS modernization showed that the Army has established a framework for managing and controlling the program. Army has defined modernization requirements, justified mission requirements, established functional coordinating groups to increase user involvement, and established central approval and coordination of all new systems initiatives.

We identified 11 projects related to SDS modernization, ranging in scope from new software application development to hardware and system software upgrades. We also observed that each project contained critical life-cycle management controls. For example:

- Each project had a designated project officer and applicable life-cycle management documentation.
- Functional coordinating groups representing SDS users were established to help define current and future system requirements.
- Each new depot initiative to acquire equipment or software was submitted to the Deputy Chief of Staff, Information Management, Depot Systems Command, for approval of the requirement, regardless of dollar value.
- Each initiative was coordinated with the Depot Systems Command functional manager, and if appropriate, was coordinated with the SDS Modernization Project Office. After approval, it was added to the Depot Systems Command's Information Management Plan.

Special Budget Exhibits Did Not Clearly Explain SDS Cost to the Congress

OMB and Defense budget regulations require agencies to inform Congress of their information technology requirements. These regulations require information, such as data processing requirements, objectives, and estimated cost and schedule for each major system, be reported to the Congress through the annual budget process. Reporting requirements help provide clear, timely disclosure of systems resource requirements, ensuring effective congressional oversight and control over funding.

We found that the Army's budget exhibits for SDS did not clearly distinguish resource requirements needed for SDS modernization from those needed to operate and maintain the existing system. The Army's special budget exhibits reported total estimated cost for SDS at $745 million over a 14-year life cycle. However, we found that only $58.7 million of this cost is for SDS modernization. The remaining $686.3 million represents the total estimated cost of operating and maintaining the existing SDS, as well as the future anticipated operations and maintenance costs for the modernized system. As a result, the Congress was not clearly informed of the funding requirements for SDS modernization in the fiscal year 1988-1989 budget report.

Both OMB and Defense regulations require agencies to include, as part of their initial total budget submission, budget exhibits of estimated funding requirements for automated information technology. According to OMB Circular A-11, Data on Acquisition, Operation, and Use of Information Technology Systems, agencies must submit information on system acquisitions, operations, and information technology usage for purposes of oversight and management of information resources, as required by the Paperwork Reduction Act of 1980. The OMB circular requires agencies that obligate more than $100,000 in the past, current, or budget year for information technology activities to submit the following reports: 1) Report on Obligations for Information Technology System (43A), 2) Major Information Technology Acquisition Plans (43B), and 3) Benefit-Cost Analysis for Major Initiatives (43C).

The Defense Budget Guidance Manual, DOD 7110-1M, expands further on OMB Circular A-11 by requiring the military services to submit similarly formatted exhibits. Although both the OMB and DOD exhibits use the same exhibit numbers, each organization requires different exhibit titles. The DOD exhibits are 1) DOD Component Information Technology Summary (43A), 2) Major Automated Information System Cost (43A-1), 3) Major Information Technology Acquisition Plans (43B), and 4) Narrative Statement (43C). (See appendix for descriptions and formats of the DOD exhibits.)

Budget analysts in the Army Budget Office prepare the exhibits. The Budget Office also instructs Army commands in how to collect and submit data for these exhibits. The Budget Office then develops the exhibits based on the data submitted by the commands.

In June 1987, the House Appropriations Committee, Subcommittee on Defense, asked Army to revise its Major Automated Information Systems (43A-1) exhibit to separate the costs for the current system from the costs for the modernization. The Army responded that the information systems narrative (43C) already reflected funding requirements for both the current SDS and the modernization. However, our subsequent review of 43C showed that it only contained information for the modernization. The Army should have followed Defense budget guidance and used the Major Information Technology Acquisition Plans report (43B) to clearly identify the intended purpose of the requested funds for modernization. This exhibit was also required because the modernization program exceeds the specified dollar threshold. Had Army prepared 43B for the modernization program, this would have provided the information later requested by the Subcommittee.

When we informed the Army budget official responsible for the special exhibits that the 43B report had not been used, he recognized the problem and agreed to take appropriate action. The omission might have been caused, he said, in part, because commands did not fully understand Budget Office instructions on how to collect and submit information for the special exhibits.

Army Has Initiated Corrective Actions to More Clearly Disclose SDS Funding Requirements

Before we concluded our review, Army budget officials initiated actions to alleviate the problems we identified. They 1) established a budget reporting indicator specifically for the SDS modernization program, requiring it to be reported separately for the next budget submission (fiscal year 1990 and 1991), and 2) began to clarify and expand the command operating budget instructions used by commands to collect and submit information for the exhibits. Expanding these instructions should help ensure that commands collect and submit more consistent and complete information.

We believe that the corrective actions, when appropriately implemented, will correct the problems. However, because these actions were not fully implemented when we concluded our review, we could not evaluate their effectiveness.

Scope and Methodology

To determine whether the Army had a framework for managing and controlling SDS modernization initiatives, we 1) reviewed Defense and Army system development policies and procedures; 2) reviewed documents, such as mission need statements, management plans, the acquisition strategy, and economic analyses for the modernization program; and 3) interviewed Depot System Command and the Logistics System Support Activity officials. For information on SDS resources and budgetary requirements, we 1) determined the cost and scope of modernization initiatives; 2) reviewed OMB and Defense acquisition and budget guidance for information technology and Army's fiscal year 1988 Budget Exhibits for Information Technology Systems; and 3) interviewed Army Budget Office officials.

Our work was conducted primarily at the Depot System Command and the Logistics System Support Activity, at the Letterkenny Army Depot in Chambersburg, Pennsylvania. Both organizations are involved in the SDS modernization program. We also did work at the Department of Army Budget Office at the Pentagon, which develops budget exhibits for automated information systems. Our work was conducted between August 1987 and January 1988 and was performed in accordance with generally accepted government auditing standards. The views of responsible agency officials were sought during the course of our review and are incorporated where appropriate.

We are sending copies of this report to the Secretary of the Army, the House and Senate Committees on Appropriations, and the House and Senate Committees on Armed Services. We will also make copies available to other interested parties upon request. If you have any questions regarding this report, please contact John Stephenson at (202) 275-3188.

Sincerely,

William S. Franklin

William S. Franklin
Associate Director

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Department of Defense's Budget Submission Requirements for Information Technology Programs

Department of Defense's (DOD) Budget Guidance Manual (DOD 7110-1M, Section 10 - Special Analyses, Chapter 2B2 - Information Technology Program) provides agency guidance on how to prepare the data needed for oversight of information technology requirements. The guidance requires Defense units to prepare exhibits of these requirements and to submit them with the organization's initial annual budget submission. This appendix includes a description of each exhibit, followed by Defense's required format for each exhibit.

1. Exhibit 43A, Defense Component Information Technology Summary. This exhibit is required of any Defense organization when total cost for information technology exceeds $100,000. It should summarize (1) major initiatives that influence the current fiscal budget, (2) the management process used to validate submitted data, and (3) costs changes between the previous year, calendar year, and budget year.

2. Exhibit 43A-1, Major Automated Information Systems Cost. This exhibit is required for each major automated information system included in the 43A summary. It should summarize the Defense organization's total information technology cost. It should also provide the system's estimated total life-cycle cost, schedule, and current milestone status. In addition, costs are to be broken out by fiscal year (current year through budget year plus four additional years), major cost element, and budget account.

3. Exhibit 43B, Information Technology Acquisition Plans. This exhibit is required for each planned acquisition of services and equipment that exceeds $2 million in the budget year or exceeds $8 million cumulative cost for capital investment, rental, and commercial services during the current fiscal year through budget year plus four additional years. It should describe future plans and be consistent with major automated systems described on exhibits 43A-1.

4. Exhibit 43C, Narrative Statement. This exhibit is required for each each acquisition described in a 43B exhibit. It should concisely describe the economic and operational benefits of each automated information system planned, being developed, or undergoing a major modification.

Table I.1: Budget Exhibit 43A
(DOD Component) FY 19__ (Dollars in Thousands)

DOD Component Information Technology Summary	19PY	19CY	19BY
1. Capital Investments ($000)			
A Purchase of hardware			
B Purchase of software or other equipment			
C Site or Facility			
Subtotal			
2. Personnel			
A Compensation, benefits and travel ($000)			
B Workyears			
Subtotal			
3. Equipment rental, space, and other operating costs ($000)			
A Lease of information technology equipment			
B Space			
C Supplies and other			
Subtotal			
4. Commercial services ($000)			
A ADPE time			
B Leased telecommunications services			
C Operations and maintenance[a]			
D Systems analysis and programming			
E System design and engineering			
F Studies and other			
Subtotal			
5. Interagency services ($000)			
A Payments			
B Offsetting collections			
Subtotal			
6. Intra-Agency services ($000)			
A Payments			
B Offsetting collections			
Subtotal			
7. Other services ($000)			
A Payments			
B Offsetting collections			
Subtotal			
Total			
Total Obligations			
Workyears			

[a]By appropriation (specify) for total and line 3A above. Provide a separate breakdown of both hardware and software contractor maintenance costs by FY

Table I.2: Budget Exhibit 43A-1

(DOD Component) FY 19__ (Dollars in Thousands)

Automated Information System Name & Number _____
LCC $_____M
Years _____
Milestone _____

Major Automated Information System Cost

		Warner Exempt					
		PY	CY	BY+1	BY+2	BY+3	BY+4
1.	**Capital Investments ($000)**						
	A. Purchase of hardware						
	B. Purchase of software or other equipment						
	C. Site or facility						
	Subtotal						
2.	**Personnel**						
	A. Compensation, benefits and travel ($000)						
	B. Workyears						
	Subtotal						
3.	**Equipment rental, space, and other operating costs ($000)**						
	A. Lease of information technology equipment						
	B. Space						
	C. Supplies and other						
	Subtotal						
4.	**Commercial services ($000)**						
	A. ADPE time						
	B. Leased telecommunications services						
	C. Operations and maintenance						
	D. Systems analysis and programming						
	E. System design and engineering						
	F. Studies and other						
	Subtotal						
5.	**Miscellaneous services ($000)**						
	A. Payments (interagency, intra-agency, other)						
	B. Offsetting collections (interagency, intra-agency, other)						
	Subtotal						
	Total						
	Total Obligations						
	Workyears						
	By Appropriation (specify)						

Table I.3: Budget Exhibit 43B
(DOD Component) 19CY - 19BY+4 (Dollars in thousands)

Major Information Technology Acquisition Plans
BY 19__

Logistics Systems

Name of Major AIS #1

Item	Data facsimile network					
Obligations	19CY	19BY	19BY+1	19BY+2	19BY+3	19BY+4
	570	597	597	597	597	597
Description	As a result of a pilot test conducted in FYXX, the bureau began a phased installation of a digital facsimile network to 59 stations nationwide.					
Item	Teleprocessing services contract					
Obligations	19CY	19BY	19BY+1	19BY+2	19BY+3	19BY+4
	–	–	–	–	3,350	3,350
Description	Services recently acquired under a TSP contract that will be reacquired					

Medical Systems

Name of Major AIS #2,etc

Item	Competitive replacement of central computing facility					
Obligations	19CY	19BY	19BY+1	19BY+2	19BY+3	19BY+4
	–	–	12,400	1,400	3,700	2,000
Description	Purchase and maintenance costs associated with procurement of new central computing facility.					

Table I.4: Budget Exhibit 43C
(DOD Component) FY 19__

Narrative Statement	
I. AIS Title and Number	For each Exhibit 43B AIS that is in development or undergoing a major modification, include system or aggregate system official designation or title, acronym and number (if applicable)
II. Responsible Organization	Component organizational element reponsible for system. Include project manager name, address, telephone number

III. Scope

A. Mission Supported: Describe the basic requirement(s) for the AIS in the DOD component information resource mission.

B. Functions Performed: Specify the key functions the AIS will perform and support. Describe interrelationships to other systems or elements of the organization/command/higher headquarters.

C. Current ADP Resources Utilized: By major subdivision, if necessary, identify equipment such as CPU's, mini's, terminals, software, and personnel resources, etc.

D. Benefits: Describe economic and/or operational benefits of the AIS.

IV. Milestones: Identify the significant life cycle milestones during the CY and BY and the approval authority (MAISRC, Service AISRC, other) for those milestones.

Decision Point	Date	Description (Action ID)	Review

V. Major Items of Interest (for each related 43A-1 (IT-43A-1)):

A. Status: Provide insight into the program status, problem areas, and major initiatives of the current FY budget.

B. Contracts: Identify prime contractors, their involvement, and type of government obligation (fixed price, cost plus, etc.); highlight contract performance (ahead of schedule, under cost, etc).

C. Resource Increase (exceeding 30%): If current year and budget year difference(s) are greater than thirty percent, explain the difference.

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